# Original (for SUBMISSION )

0	For receiving Office use only				
0-1	International Application No.				
0-2	International Filing Date				
0-3	Name of receiving Office and "PCT International Application"				
0-4	Form PCT/RO/101 PCT Request				
0-4-1	Prepared Using	PCT-SAFE [EASY mode] Version 3.50 (Build 0002.163)			
0-5	Petition  The undersigned requests that the present international application be processed according to the Patent				
0-6	Cooperation Treaty  Receiving Office (specified by the	United States Patent and Trademark			
	applicant)	Office (USPTO) (RO/US)			
0-7	Applicant's or agent's file reference	034136-021			
ī	Title of Invention	TRIMETASPHERES FOR ION SELECTIVE MEMBRANES			
[[	Applicant				
11-1	This person is	applicant only			
II-2	Applicant for	all designated States except US			
11-4	Name	LUNA INNOVATIONS INCORPORATED			
II-5	Address	2851 Commerce Street Blacksburg, Virginia 24060 United States of America			
II-6	State of nationality	US			
11-7	State of residence	US			
II-8	Telephone No.	540.552.5128			
11-9	Facsimile No.	540.951.0760			
III-1	Applicant and/or inventor				
111-1-1	This person is	applicant and inventor			
III-1-2	Applicant for	US only			
III-1 <b>-4</b>	Name (LAST, First)	KOENE, Bryan			
III-1-5	Address	1835 Augusta National Road Blacksburg, Virginia 24060 United States of America			
III-1-6	State of nationality	CA			
III-1-7	State of residence	US			

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III-2	Applicant and/or inventor			
III-2-1	This person is	applicant and inventor		
111-2-2	Applicant for	US only		
III-2 <del>-</del> 4	Name (LAST, First)	PHILLIPS, J., Paige		
III-2-5	Address	2539 12 O'Clock Knob Road Salem, Virginia 24153 United States of America		
III-2 <b>-</b> 6	State of nationality	us		
111-2-7	State of residence	us		
III-3	Applicant and/or inventor			
III-3-1	This person is	applicant and inventor		
111-3-2	Applicant for	US only		
III-3-4	Name (LAST, First)	ROGERS, Martin, E.		
III-3-5	Address	1222 Village Way South Blacksburg, Virginia 24060 United States of America		
111-3-6	State of nationality	us .		
III-3-7	State of residence	us		
IV-1	Agent or common representative; or address for correspondence The person identified below is hereby/ has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent		
IV-1-1	Name (LAST, First)	DADIO, Susan, M.		
IV-1-2	Address	Burns, Doane, Swecker & Mathis, LLP P. O. Box 1404 Alexandria, Virginia 22313-1404 United States of America		
IV-1-3	Telephone No.	703.836.6620		
IV-1-4	Facsimile No.	703.836.2021		
IV-1-6	Agent's registration No.	40,373		
IV-2	Additional agent(s)	additional agent(s) with same address as first named agent		
IV-2-1	Name(s)	LEE, Laura, L. (48,752)		
V	DESIGNATIONS			
V-1	The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.			

#### Original (for SUBMISSION)

VI-1	Priority claim of earlier national application					
VI-1-1	Filing date	26 March 2004 (26.03.2004)				
VI-1-2	Number	60/556,433				
VI-1-3	Country	us ¨				
VI-2	Priority document request		**			
	The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1				
VII-1	International Searching Authority	United States Patent	and Trademark			
	Chosen	Office (USPTO) (ISA/				
Vill	Declarations	Number of declarations				
VIII-1	Declaration as to the identity of the inventor	-				
VIII-2	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	_				
VIII-3	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	-				
VIII-4	Declaration of inventorship (only for the purposes of the designation of the United States of America)	-				
VIII-5	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	-				
IX	Check list	number of sheets	electronic file(s) attached			
IX-1	Request (including declaration sheets)	4	✓			
IX-2	Description	8	-			
IX-3	Claims	3	-			
IX-4	Abstract	1	✓			
IX-5	Drawings	3	-			
IX-7	TOTAL	19				
	Accompanying Items	paper document(s) attached	electronic file(s) attached			
IX-8	Fee calculation sheet	/	-			
IX-17	PCT-SAFE physical media	-	<b>✓</b>			
IX-18	other .					
IX-18	other	Transmittal Letter, Postcard, Check				
IX-19	Figure of the drawings which should accompany the abstract	1				
IX-20	Language of filing of the international application	English				

#### Original (for SUBMISSION)

X-1	Signature of applicant, agent or common representative	Susan M. Die
X-1-1	Name (LAST, First)	DADIO, Susan, M.
X-1-2	Name of signatory	
X-1-3	Capacity	

## FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	·
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/US
10-6	Transmittal of search copy delayed until search fee is paid	

## FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by			 
	the International Bureau	-		

PCT (ANNEX - FEE CALCULATION SHEET)
Original (for SUBMISSION)
(This sheet is not part of and does not count as a sheet of the international application)

0	For receiving Office use only				
0-1	International Application No.				
0-2	Date stamp of the receiving Office				
	<u> </u>	<u> </u>			
0-4	Form PCT/RO/101 (Annex)	1			
U-4	PCT Fee Calculation Sheet				
0-4-1	Prepared Using	PCT-SAFE [EAS]	Y mode]		
		Version 3.50	(Build 0002.16	3)	
0-9	Applicant's or agent's file reference	034136-021			
2	Applicant	LUNA INNOVATIO	ONS INCORPORAT	ED	
12	Calculation of prescribed fees	fee amount/muliplier	Total amounts (USD)		
12-1	Transmittal fee T	⇔	300		
12-2-1	Search fee S	□ □ □	1000		
12-2-2	International search to be carried out by	US			
12-3	International filing fee				
	(first 30 sheets) i1	1134			
12-4	Remaining sheets	0			
12-5	Additional amount (X	0			
12-6	Total additional amount i2	0			
12-7	i1 + i2 = i	1134			
12-12	EASY Filing reduction R	-81			
12-13	Total International filing fee (i-R)	c)	1053	<del></del>	
12-14	Fee for priority document				
	Number of priority documents requested	1			
12-15	Fee per document (X	20			
12-16	Total priority document fee: P	<b>₽</b>	20		
2-17	TOTAL FEES PAYABLE (T+S+I+P)	<b>₽</b>	2373		
2-19	Mode of payment	cheque			
2-20	Deposit account instructions				
	The receiving Office	United States Office (USPTO)	United States Patent and Trademark Office (USPTO) (RO/US)		
12-20-2	Authorization to charge any deficiency or credit any overpayment in the total fees indicated above	1			
2-21	Deposit account No.	02-4800			
2-22	Date	25 March 2005 (25.03.2005)			
12-23	Name and signature				
		Sesar H. Des			